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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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06/27/2001

Joun Ho Lee

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1900 K STREET, NW
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EXAMINER

KIELIN, ERIK J

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 05/10/2005

:

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	09/891,531		LEE, JOUN	
	Examiner		Art Unit	
	Erik Kielin		2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-21 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/7/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action responds to the Amendment filed 12 January 2005 and the IDS filed 7 December 2004.

Information Disclosure Statement

1. Examiner acknowledged the translation of KR 2000-31956. On the first page of the document is a statement that the translation is complete. However, it is noted with interest that there exists no mention of several of the reference characters shown in the drawings or what the materials may be. For example, none of reference characters 113, 115, 120, 121, 122, 131, 132, 141, 142, 145, 146, 151, and 152 are recited anywhere in the translation. Moreover, several reference characters, such as 24 and 26, are specifically mentioned in conjunction with Fig. 2, but are shown nowhere in Fig. 2 nor in any of the other Figs. 1 and 3-8. Additionally, Fig. 6 is supposed to be a cross-section along the line D-D' of Fig. 3, but is at least incorrectly labeled with reference characters because in Fig. 3, the feature indicated by reference character 142 is shown directly over the feature indicated by 103 while in the cross-section of Fig. 3 shown in Fig. 6 shows feature 141 over feature 103. Similarly feature 142 is shown over 109' in Fig. 6 while 141 is shown over feature 109' in Fig. 3.

Accordingly, it would appear that the translation is incomplete. See MPEP 609(III).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by KR 2000-31956 (Kim), assigned to the same assignee as the instant invention.

Regarding claim 1, Kim discloses an in-plane switching mode LCD device having a plurality of pixels and method of forming the LCD comprising:

first 110 and second 120 substrates (Figs. 3-6);

data line 102 and gate line 101 on the first substrate 110 to define a plurality of pixel regions;

at least one data electrode 108 on the first substrate 110;

at least one common electrode 109 on the first substrate 110;

a transparent conductive film in a layer over the common electrode 109, the transparent conductive film electrically connected with the common electrode 8 (see NOTE below); note specifically that the translation provided by Applicant states in this regard at page 7 [first page after the Abstract is taken to be page 1]); and

a liquid crystal layer 122 between the first 110 and second substrates 120, wherein the data electrode 108 and the common electrode 109 generate an in-plane electric field substantially parallel to the first and second substrates for controlling an amount of light at the respective pixel region.

NOTE: In regard to the transparent conductive film connected to the common electrode 109, the translation provided by Applicant states in this regard at page 7 [first page after the Abstract is taken to be page 1] states in pertinent part,

“The above-mentioned in-plane switching mode active matrix type liquid crystal display device accomplishes the above-mentioned first to

third objects. Specifically, the in-plane switching mode active matrix type liquid crystal display device which (a) prevents vertical cross-talk without reduction in an aperture ratio, in which (b) the data line is overlapped by **the transparent electrode electrically connected to the common electrode**, and the common electrode could have a reduced resistance..." (Emphasis added.)

The above excerpt --according to the translation-- is directed to Fig. 3, as discussed in the preceding paragraph, hence the recitation, "[t]he **above-mentioned** in-plane switching mode active matrix" (emphasis added). With this in mind, because (1) the data line **102** is shown to be over the common line **103** and common electrode **109** that are formed at the same time from the same material layer by etching, and because (2) the data line **102** "is overlapped by the transparent electrode", the transparent electrode must necessarily be in a layer overlying the common electrode **109**. Therefore this passage of the translation discloses the critical feature of the invention.

Regarding claim 2, the transparent conductive film includes indium tin oxide ITO, (pages 4 and 5 of the translation).

Regarding claim 3, a gate insulating film **112** is on the common electrode **109** (Fig. 24a).

Regarding claim 4, a passivation film **113** is on the common electrode **109**.

Regarding claims 5, the common electrode **109** is necessarily electrically connected with the transparent conductive film through a contact hole a the passivation film because the excerpt quoted above, in combination with the showing in Fig. 3, indicates that the data electrode, transparent electrode and common electrode are formed in separate layers which must be electrically insulated from each other to prevent electrical shorting, hence a passivation layer must be formed between the layers. A contact hole is the only means to electrically connect two

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electrodes formed in separate layers separated by a passivation layer. This is confirmed by the translation at page 13, lines 9-12.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim**.

Although the common electrode is not indicated to be electrically connected with the transparent conductive film through a laser welding process, this limitation does not have patentable weight in the absence of differences between the electrical connection disclosed in **Kim** and that produced by laser welding.

Note that a “product by process” claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a “product by process” claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not. Note that applicant has the burden of proof in such cases, as the above case law make clear.

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6. Claims 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim** in view of Applicant's admitted prior art (**APA**).

The prior art of **Kim**, as explained above, discloses each of the claimed features except for indicating the identity of the liquid crystal.

APA indicates that cyano (CN) based and fluorine (F) based liquid crystals are known in the art (instant specification p. 5, lines 6-21).

It would have been obvious for one of ordinary skill in the art, at the time of the invention to use either of CN or F bases liquid crystals as taught by **APA** in the LCD of **Kim** because **Kim** is silent to the identity of the liquid crystal such that one of ordinary skill would be motivated to use known liquid crystals such as those indicated to be known by **APA**. Moreover, it has been held that the selection of a known material based on its suitability for its intended use is *prima facie* obvious. The selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair & Carroll Co., Inc. v.*

Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945) (Claims to a printing ink comprising a solvent having the vapor pressure characteristics of butyl carbitol so that the ink would not dry at room temperature but would dry quickly upon heating were held invalid over a reference teaching a printing ink made with a different solvent that was nonvolatile at room temperature but highly volatile when heated in view of an article which taught the desired boiling point and vapor pressure characteristics of a solvent for printing inks and a catalog teaching the boiling point and vapor pressure characteristics of butyl carbitol. "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put

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in the last opening in a jig - saw puzzle." 65 USPQ at 301.). See also *In re Leshin*, 125 USPQ 416 (CCPA 1960) ("Mere selection of known plastics to make container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious; and in view of 35 U.S.C. 103 it is a wonder that the point is even mentioned.") (See MPEP 2144.07.)

Allowable Subject Matter

7. Claims 11-21 are allowed.
8. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 11-21, **Kim** teaches all of the features of claim 11 except that the common and data electrodes are formed in separate layers, as required by the method recited by claim 11. Although **Kim** teaches that it is known in the art to form the common and data electrodes in separate layers, **Kim** also teaches away from this configuration due to alignment problems that are generated by forming the common and data electrodes in separate layers. Accordingly, one of ordinary skill would not be motivated to deviate from forming the common and data electrodes of **Kim** in the same layer.

Regarding claims 9 and 10, the **Kim** reference does not teach or suggest, in combination with the other claimed limitations, the location of the transparent electrode electrically connected to the common electrode. Nor does **Kim** suggest that the transparent electrode extends toward

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the data electrode. Given the lack of information regarding the transparent electrode, there exists no suggestion in the art as to where it should be placed or its configuration, in general.

Conclusion

10. Applicant's submission of the translation on 12 January 2005 as necessitated by the information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 7 December 2004 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

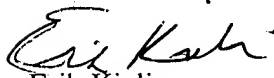
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik Kielin whose telephone number is 571-272-1693. The examiner can normally be reached from 9:00 - 19:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Erik Kielin
Primary Examiner
May 8, 2005